

XI.—Descriptions of new Species of Lepidoptera, chiefly from Central America. By HERBERT DRUCE, F.L.S., F.R.G.S., F.Z.S.

THE new species of Central-American Heterocera will be figured in the 'Biologia Centrali-Americana.'

Fam. Sphingidæ.

Subfam. CHÆROCAMPINÆ.

CHÆROCAMPA, Dup.

Chærocampa ortospana, sp. n.

Primaries dark olive-green, crossed from the apex to the inner margin close to the base by two wide, pinkish, fawn-coloured bands shaded with green, the outer margin brownish green, with a submarginal brown line from near the apex to the inner margin: secondaries black, with a band of yellowish-white spots the same as on the hind wing of *C. tersa*, but those nearest the apex are confluent and of a reddish-brown colour; the outer margins are greenish brown. The underside closely resembles that of *C. tersa*, but it is much more brightly coloured, with a pale yellow band crossing the primaries from the apex to near the base.

The head, thorax, and the upper part of the abdomen dark olive-green. A pinkish fawn-coloured streak on each side of the head and thorax; the tegulæ green, edged with yellow. A tuft of pale primrose-coloured hairs on each side of the abdomen near the base, the sides of the abdomen golden yellow, the anal half of the abdomen greenish brown. A pinkish fawn-coloured line extends from the back of the head across the middle of the thorax and down the centre of the abdomen to the anus. The underside of the former is yellowish brown. The antennæ brown, paler at the tips; the legs pinkish fawn-colour. Expanse $3\frac{1}{2}$ inches.

Hab. Mexico, Coatepec (*J. Brooks*).

A fine distinct species, of which we have received one specimen; it is allied to *C. tersa*, Drury, and *C. titana*, Druce, but differs greatly from both.

Chærocampa suana, sp. n.

Primaries uniform greyish mouse-colour, with a narrow, submarginal, dark brown line from the apex to the inner margin: secondaries black, with an indistinct row of pale

spots crossing the wing from the anal angle to near the apex. The underside the same colour as above. The head, thorax, and abdomen greyish brown, the sides of the head and thorax with a greyish-white streak; the antennæ and legs brownish grey. Expanse $2\frac{1}{2}$ inches.

Hab. Bahama Islands, New Providence.

This small species is very unlike any known to me, but it is most nearly allied to *C. porcas*, Hübn.

Subfam. *AMBULYXINÆ.*

AMBULYX.

Ambulyx donysa, n. sp.

Primaries from the base to the middle pinkish fawn-colour and from the middle to the outer margin shaded with dark brown and olive-green; a large oval-shaped dark brown spot near the base, which extends from the inner margin across the wing, but does not reach the costal margin; a dark brown line crosses the wing about the middle from the costal to the inner margin; an indistinct dark brown marking on the inner margin close to the anal angle; three waved lines cross the wing from the costal margin near the apex to near the inner margin, but do not quite reach it; the apex is pale fawn-colour: secondaries bright rose-pink, crossed from near the apex to the anal angle by a wide black band, deeply dentated; on the outer edge above the black band are two very indistinct, narrow, brownish-black lines; the inner margin and two spots close to the anal angle pale yellowish fawn-colour. The underside of both primaries and secondaries pale yellowish fawn-colour, the primaries from the base to about the middle dark rose-pink. The head and front of the thorax pale brown; the tegulæ and base of the thorax and abdomen dark brown; the underside of head, thorax, and abdomen pale yellow; legs and antennæ dark brown. Expanse $4\frac{3}{4}$ inches.

Hab. Mexico, Cuesta de Misantla (*M. Trujillo*).

This very beautiful and distinct species is allied to *A. ganascus*, Stoll, and *A. rostralis*, Boisd.

Fam. *Ægeriidæ.*

ÆGERIA, Fabr.

Ægeria hades, sp. n.

Primaries and secondaries uniform glossy bluish black, with all the veins and outer margins dull black. The underside

as above. The head, thorax, and abdomen bluish black; the underside of the head and front part of the thorax white; the antennæ and legs black. Expanse $\frac{3}{4}$ inch.

Hab. Mexico, Teapa, Tabasco (*H. H. Smith*).

Mr. Smith took one specimen of this pretty little species in February 1888.

Ægeria halmyris, sp. n.

Primaries black, with the end of the cell and a round spot beyond hyaline: secondaries whitish hyaline, with the fringe black. The head, thorax, and abdomen black, the base of the abdomen slightly yellowish; the antennæ black, with a wide white ring near the tips; the legs greyish black. Expanse 1 inch.

Hab. Mexico, Rincon, Guerrero, 2800 feet (*H. H. Smith*).

One specimen was obtained in September 1888. It is most nearly allied to *Æ. producta*, Walker, but very distinct.

Ægeria hela, sp. n.

Primaries uniformly black, with a very minute hyaline dot at the end of the cell: secondaries hyaline, with the outer margin broadly bordered with black; the fringe black. The head and antennæ black, the latter with a narrow white ring near the tips; the front of the thorax and the tegulæ yellowish brown; the thorax, abdomen, and legs dull black; the underside of the thorax yellowish. Expanse $\frac{6}{10}$ inch.

Hab. Mexico, Atoyac, Vera Cruz, April; Teapa, Tabasco, January (*H. H. Smith*).

This species is allied to *Æ. senta*, Druce, but is a much smaller insect and more darkly coloured.

Ægeria hermione, sp. n.

Primaries hyaline, slightly shaded with yellow on the inner margin, the costal and outer margins edged with yellowish brown: secondaries hyaline; the fringe of all the wings brown. The thorax and abdomen black, the collar and the tegulæ yellow, the abdomen banded with yellow; the antennæ black, with a wide yellowish-brown ring near the tips; the legs yellow, with black bands. Expanse 1 inch.

Hab. Mexico, Teapa, Tabasco, Atoyac, Vera Cruz (*H. H. Smith*).

Mr. Smith met with this species from February to May 1888.

Ægeria hipsides, sp. n.

Primaries dusky black, with the cell and a round spot at the end of the cell semihyaline: secondaries hyaline, with the veins and the fringe black. The head, thorax, and abdomen glossy black, the underside of the thorax white; the antennæ and legs black. Expanse $\frac{3}{4}$ inch.

Hab. Mexico, Amula, Guerrero, 6000 feet (*H. H. Smith*).

A very distinct species, of which only one specimen was obtained in August 1888.

Ægeria hippolyte, sp. n.

Primaries yellowish hyaline, the veins all black, the apex and outer margin edged with golden brown: the secondaries hyaline, the fringe of all the wings black. The head, thorax, and abdomen black, the base of the thorax and the anus yellow; the legs black, banded with yellow; the antennæ black. Expanse 1 inch.

Hab. Mexico, Cuernavaca, Morelos (*H. H. Smith*).

One specimen of this distinct species was taken by Mr. Smith in June 1888.

Ægeria helena, sp. n.

Primaries and secondaries clear hyaline; the costal and outer margins of all the wings brownish black. The head, thorax, and abdomen purplish black; the anus bright orange; the antennæ black from the base to the middle, then orange, excepting the points, which are black. The underside of the head, thorax, and abdomen, and the legs orange-yellow. Expanse $1\frac{1}{4}$ inch.

Hab. Mexico, Amula, Guerrero, 6000 feet (*H. H. Smith*).

This species was taken in August 1888; it is allied to *Æ. guatemalena*, Druce.

Ægeria pallene, sp. n.

Primaries and secondaries hyaline, with all the veins black; the apex and outer margin of the former broadly bordered with golden brown. The head, thorax, and abdomen black; the collar, the base of the thorax, and the last segment of the abdomen banded with orange-yellow. The underside of the head, thorax, and abdomen yellowish brown; the legs and antennæ black, the latter banded with white near the tips. Expanse $\frac{1}{2}$ inch.

Hab. Mexico, Teapa, Tabasco (*H. H. Smith*).

Mr. Smith took this species in March and April 1888; it is allied to *Æ. tryphoniformis*, Walker.

TARSOPODA, Butl.

Tarsopoda marcia, sp. n.

Primaries black; a spot at the end of the cell and a central streak reaching the base hyaline: secondaries hyaline, with the outer margin and the veins black. The head, thorax, and abdomen black; the anus yellow; the abdomen banded above with metallic gold; the underside black, the collar yellow; antennæ black; legs black, banded with yellow. Expanse $\frac{6}{10}$ inch.

Hab. Mexico, Dos Arroyos, Guerrero, 1000 feet (*H. H. Smith*).

Mr. Smith obtained two specimens of this beautiful little species in September 1888.

MELITTIA, Hübn.

Melittia Smithi, sp. n.

Primaries black, with a narrow hyaline streak from the base to the end of the cell, beyond which is an oval hyaline spot, the fringe greyish: secondaries hyaline, with the veins and fringe black, the base of all the wings clothed with long yellowish hairs. The head, thorax, and abdomen brownish black, each segment of the abdomen edged with yellow; the underside of the thorax and the abdomen yellowish brown; the antennæ black; the legs yellow, excepting the hind ones, which are thickly clothed with black hairs, with a few yellow hairs near the body. Expanse $1\frac{3}{10}$ inch.

Hab. Mexico, Rio Papagaio, Guerrero, 1200 feet, Dos Arroyos, Guerrero, 1000 feet (*H. H. Smith*).

This species was taken by Mr. Smith in September and October 1888; it is allied to *M. Butleri*, Druce, but is a smaller and altogether darker insect.

SINCARA, Walk.

Sincara mæonia, sp. n.

Primaries and secondaries hyaline, with the costal and outer margin of the former narrowly edged with black, the fringe of all the wings black; the inner margin of the primaries has a yellowish tinge extending from the base to near the anal angle. The head, thorax, and abdomen black; the front

of the palpi bright yellow; the tegulæ edged with yellow; the antennæ and legs black. Expanse 1 inch.

Hab. Mexico, Omilteme, Guerrero, 8000 feet (*H. H. Smith*).

This species is allied to *Syncara lytea*, Druce. Mr. Smith took the specimens in August 1888.

Sincara manilia, sp. n.

Primaries and secondaries yellowish hyaline, with the costal margin of the former and the fringe of all the wings black. The head, thorax, and abdomen black, the last four segments of the abdomen edged with bright yellow, the anus yellow; antennæ and legs black, the palpi yellowish in front. Expanse 1 inch.

Hab. Mexico, Sierra de los Aguas Escondidas, Guerrero, 7000 feet, Omilteme, Guerrero, 8000 feet (*H. H. Smith*).

This pretty little species was taken in July and August 1888.

Sincara manoba, sp. n.

Primaries brownish black, darkest along the costal margin; secondaries yellowish hyaline, with the fringe black. The head, thorax, and abdomen dull black; antennæ black. Expanse 1 inch.

Hab. Mexico, Teapa, Tabasco (*H. H. Smith*).

One specimen of this dull-looking species was taken by Mr. Smith in February 1888.

Fam. Chalcosiidæ.

GINGLA, Walker.

Gingla æqualis, sp. n.

Primaries orange-red, broadly bordered with black from the apex to the anal angle; secondaries deep black. The underside the same as above. The head, thorax, and abdomen black; the tegulæ orange-red; the antennæ and legs black. Expanse $1\frac{1}{2}$ inch.

Hab. Mexico, Coatepec (*J. Brooks*).

One specimen of this most interesting species was sent; it exactly resembles *Ptychoglène æqualis*, Walker.

Fam. Zygaenidæ.

Subfam. EUCHROMINÆ.

SYNTOMEDIA, Harris.

Syntomedia vulcana, sp. n.

Primaries uniformly deep glossy black, with a rich purplish tinge in some lights; a small streak in the cell and a round spot near the base on the inner margin very pale primrose-colour; a white dot close to the base on the costal margin: secondaries deep glossy black, the same as the primaries, the basal part hyaline, the same as in *Syntomedia melanthus*, Cramer. The head, thorax, and abdomen glossy bluish black, a row of white spots on each side of the latter; the legs and antennæ black, the antennæ with the tips white on the underside. Expanse $2\frac{2}{10}$ inches.

Hab. Mexico, Tierra Colorado, Guerrero, 2000 feet (H. H. Smith).

One specimen of this fine species was taken by Mr. Smith in October 1888; it is allied to *S. melanthus*, Cr., but more closely to *S. Sauleyi*, Guén.

ICHORIA, Butl.

Ichoria (?) parthia, sp. n.

Primaries glossy bluish green: secondaries the same, but slightly hyaline near the base and the inner margin. The head, thorax, and abdomen, the legs and antennæ bluish green. The underside of all the wings is bluer than the upperside. Expanse $1\frac{2}{10}$ inch.

Hab. Nicaragua, Chontales (T. Belt); Panama, Bugaba, 800 to 1500 feet (Champion).

A pretty little species, not nearly allied to any known to me.

LÆMOCHARIS, Herr.-Sch.

Læmocharis masa, sp. n.

Primaries and secondaries hyaline, the primaries broadly tipped with black at the apex and along the outer margin, secondaries edged with black from the apex to near the anal angle; a small spot on each side of the head and one at the base of the thorax bright carmine; the abdomen, legs, and antennæ dull black, the front of the head and collar greyish white. Expanse $\frac{3}{4}$ inch.

Hab. Mexico, Teapa, Tabasco, February, March, and April (H. H. Smith).

A small species allied to *L. stryma*, Druce, from which it is at once distinguished by the wide black apex of the primaries.

GYMNOPODA, Felder.

Gymnopoda mecrida, sp. n.

Primaries and secondaries uniform sooty black, slightly hyaline at the base of the wings. The head, tegulæ, and base of the thorax black, the thorax and abdomen bright scarlet; the antennæ and legs black. Expanse $1\frac{1}{4}$ inch.

Hab. Mexico city (F. D. Godman).

This beautiful little species is allied to *G. subflamma*, Druce, from Chiriqui, from which it is at once distinguished by the entirely different colour of the thorax and abdomen.

COSMOSOMA, Hübn.

Cosmosoma ethodæa, sp. n.

Primaries and secondaries yellowish hyaline; the costal margin from the base to near the apex edged with bright yellow and the inner margin from the base to beyond the middle edged with bright orange-yellow; the apex and outer margin broadly black, and a black spot at the end of the cell: secondaries with the apex and outer margin as far as the anal angle black, and a black line crossing the middle of the wing from the costal margin to the anal angle. The underside as above. The head and the underside of the thorax and abdomen black; the antennæ black, whitish at the tips; collar dark blue, the upperside of the thorax and abdomen bright orange, banded with dark blue; the two anal segments dark blue; the tegulæ orange, edged with black; the legs black. Expanse $1\frac{3}{10}$ inch.

Hab. Mexico, Atoyac, Vera Cruz, April (H. H. Smith).

A beautiful species, allied to *C. elegans*, Druce.

DYCLADIA, Felder.

Dycladia lydia, sp. n.

Primaries black, with the hyaline spaces as in *D. mexicana*, but slightly larger: secondaries hyaline, bordered with black at the apex and outer margin, but not so deeply as in *D. mexicana*. The front of the head bright dark blue; the

thorax and basal half of the abdomen chrome-yellow; the tegulæ chrome-yellow, edged with black on the lower side; antennæ black, with white tips; the sides of the abdomen near the base and two or three small dots in a line down the middle bright greenish blue; the lower half of the abdomen and the anus and underside bright red, the anal segment banded with blue; legs black. Expanse $1\frac{1}{4}$ inch.

Hab. Mexico, Teapa, Tabasco, March (*H. H. Smith*).

This species is allied to *D. mexicana*, from which it is at once distinguished by the entirely different coloration of the thorax and abdomen.

Dycladia thera, sp. n.

Primaries black, with the hyaline markings almost identical with those of *D. mexicana*, but with the apical spot smaller and narrower; also the black margin of the secondaries considerably narrower. The underside of all the wings as above. The head and collar bright blue, the thorax and upperside of the abdomen dull black; tegulæ black, with a yellow dot at the base, also a yellow spot on each side of the abdomen close to the base; the sides of the abdomen and the anal segment bright blue; the underside of the abdomen and the anal tuft bright scarlet; antennæ and legs black. Expanse $1\frac{1}{2}$ inch.

Hab. Mexico, Teapa, Tabasco, February (*H. H. Smith*).

This species is allied to *D. mexicana*, but it is a larger insect and entirely different in the coloration of the head, thorax, and abdomen.

Dycladia utica, sp. n.

Primaries hyaline, broadly bordered at the apex and along the outer margin with black, the base red: secondaries hyaline, with the apex and outer margin edged with black. The head, thorax, and abdomen black; the collar and the tegulæ red; a streak down the centre of the thorax and two spots at the base white; the underside of the thorax and the base of the abdomen white; the legs black and white; the antennæ black, becoming white near the tips. Expanse $1\frac{1}{10}$ inch.

Hab. Mexico, La Venta, Guerrero, 300 feet (*H. H. Smith*).

This species is most nearly allied to an unnamed one in my own collection from the Bahama Islands, and comes into the group with *D. columbina*, Hübn.; it was taken by Mr. Smith in September 1888.

Fam. Arctiidæ.

Subfam. CTENUCHINÆ.

THEAGES, Walk.

Theages striata, sp. n.

Primaries brownish fawn-colour, streaked with yellowish-white lines from the base to the outer margin; a narrow streak of the same colour crosses the wing from beyond the middle of the costal margin to near the anal angle, from which a rather wider line extends to the outer margin; secondaries dusky hyaline white, shaded with brown at the apex and along the costal margin. Underside as above, but the markings of the primaries much more indistinct. The head, thorax, and abdomen blackish brown, the two anal segments and the sides of the abdomen almost to the base pale yellow; the underside of the abdomen streaked with dusky white from the base to the anus; the palpi orange at the base, with the tips black; antennæ pale whitish brown; legs pale brown. Expanse $1\frac{3}{4}$ inch.

Hab. Mexico, Coatepec (*J. Brooks*).

This species is allied to *Theages leucophaea*, Walk.

EVIUS, Walker.

Evius Walkeri, sp. n.

Primaries and secondaries uniform pale yellow, the primaries broadly bordered with white at the apex and outer margin; a series of black streaks cross the white between the veins as far as the yellow colour. The head, thorax, and abdomen pale yellow; the antennæ black. Expanse $1\frac{1}{2}$ inch.

Hab. Panama, Taboga Island (*J. J. Walker*).

A pretty little species, very distinct from any I have seen.

HALSIDOTA, Hübn.

Halsidota phellia, sp. n.

♂. Primaries pale straw-colour, thickly speckled with minute blackish-brown dots, a very distinct black spot at the end of the cell; secondaries creamy white, slightly hyaline near the base; two small brownish dots close to the anal angle, the fringe white. The head and thorax straw-colour; the tegulæ with a small black dot in front; the abdomen

brownish to near the anus, which is pale straw-colour. The female is the same as the male, excepting that it is larger and paler in colour. Antennæ of the male deeply pectinated, those of the female simple. Expanse, ♂ $1\frac{3}{4}$, ♀ $2\frac{1}{4}$ inches.

Hab. South-east Brazil, Rio.

Halesidota (?) *syracosia*, sp. n.

Primaries creamy white, with all the veins broadly edged with pinkish fawn-colour; the fringe yellowish: secondaries hyaline white, shaded at the base and along the inner margin with pale pink, the veins and the fringe yellowish. The head and the front of the thorax fawn-colour; the tegulæ darker, edged with white; the thorax and the abdomen pinkish, except at the apex of the latter, where it is yellow. The antennæ and legs reddish yellow. Expanse 2 inches.

Hab. Mexico, Omilteme, Guerrero, 8000 feet (*H. H. Smith*).

One specimen of this beautiful species was taken by Mr. Smith in July 1888; it somewhat resembles *Automolis lateritia*, Herr.-Sch., but is entirely differently coloured.

PHÆGOPTERA, Herr.-Schäff.

Phægoptera hyalina, sp. n.

Primaries and secondaries entirely hyaline, the veins being slightly whitish. The head and thorax creamy white; the abdomen yellow at the anus and on the underside white; the antennæ yellow; the legs white. Expanse $2\frac{1}{2}$ inches.

Hab. Mexico, Sierra de los Aguas Escondidas, Guerrero, 7000 feet (*H. H. Smith*).

This distinct species is allied to *Phægoptera cornea*, Herr.-Sch., and was taken by Mr. Smith in July 1888.

ECPANTHERIA, Hübn.

Ecpantheria amulaensis, sp. n.

Primaries white, crossed from the costal to the inner margin by two broad, broken, black bands, between which a row of small black spots crosses from the costal to the inner margin; several small black spots close to the base, and a row of black spots along the outer margin, some larger than others: secondaries white, with some small black dots round the outer margin. The front of the head and the collar

white, tipped with black in front; the tegulæ white, with two black spots on each; the thorax white, with two central black spots. The underside of the head and thorax, the upper and underside of the abdomen, the legs and antennæ all deep black. The underside of the wings the same as above, excepting that the black bands are browner in colour. Expanse $1\frac{1}{2}$ inch.

Hab. Mexico, Amula, Guerrero, 6000 feet (*H. H. Smith*).

This species was taken in August 1888; it is allied to *Epantheria extrema*, Walker, but is very distinct.

ZATREPHES, Hübn.

Zatrephes philobia, sp. n.

Primaries golden straw-colour, irrorated with brown dots; a >-shaped line near the base, above the point of which is a round silver spot and beyond a large silver patch, much the same as in *Z. Trailii*, Butler, the silver patches surrounded with darker brown; a curved narrow submarginal line crosses the wing from the costal to the inner margin, the fringe dark brown: the secondaries creamy white, dusky along the outer margin from the base to near the anal angle, the fringe yellowish white. The head, thorax, and abdomen pale straw-colour. Expanse $1\frac{3}{4}$ inch.

Hab. Mexico, Jalapa (*Höge*); Omilteme, Guerrero, 8000 feet (*H. H. Smith*).

This very beautiful species was taken by Mr. H. H. Smith in July 1888; it is most nearly allied to *Zatrephes Trailii*, Butler, from the Amazons.

Fam. Lithosiidæ.

BRYCEA, Walker.

Brycea esula, sp. n.

Primaries uniform brownish fawn-colour, the costal margin edged with yellow: secondaries orange, broadly bordered with black from the apex to the anal angle. The underside of all the wings orange, broadly bordered with black. The head, thorax, and tegulæ brownish fawn-colour, the collar orange; the abdomen yellow, with a narrow, black, central streak from the base to the anus, where it becomes wider; the antennæ black; the underside of the abdomen and the legs brownish fawn-colour. Expanse $1\frac{1}{4}$ inch.

Hab. Mexico, Cuernavaca, Morelos (*H. H. Smith*).

A pretty species, taken by Mr. Smith in June 1888.

Brycea arbela, sp. n.

Primaries uniform slate-colour, edged with yellow along the costal margin, but not reaching the apex: secondaries pale yellow, broadly bordered with black. The underside of all the wings pale yellow, bordered with black. The head, thorax, abdomen, and legs all black. Expanse $1\frac{3}{4}$ inch.

Hab. Mexico, near the city (*F. D. Godman*).

Mr. Godman took one specimen of this species in poor condition; it is allied to the preceding species, but quite distinct.

Brycea semirosea, sp. n.

Primaries pinkish fawn-colour, the costal margin edged with bright carmine near the base; a short carmine streak from the base along the inner margin: secondaries bright carmine, broadly bordered with black from the apex to the anal angle. The underside of all the wings bright carmine, bordered with black. The head, thorax, and tegulæ brownish fawn-colour; the antennæ and legs black; the collar red. Expanse $1\frac{1}{2}$ inch.

Hab. Mexico, Atoyac, Vera Cruz (*Schumann*).

One specimen of this species was sent; it is allied to *B. arbela*, but very different in colour.

Brycea feronia, sp. n.

Primaries dark brown, darkest along the inner margin; a short streak from the base and beyond this a square-shaped spot, both creamy white: secondaries bright orange, broadly bordered with black, the underside of all the wings bright orange, bordered with black. The head, thorax, and abdomen black, the sides of the abdomen yellow; the antennæ and legs black. Expanse $1\frac{1}{2}$ inch.

Hab. Mexico, Omilteme, Guerrero, 8000 feet (*H. H. Smith*).

This very distinct and pretty insect was taken in July 1888 by Mr. Smith; it is allied to *Brycea disjuncta*, Walker.

PTYCHOGLENE, Felder.

Ptychoglène pomponia, sp. n.

Primaries brown, with the costal margin edged with red from the base to the apex: secondaries black, with the costal half bright carmine. The underside of the primaries bright

scarlet, the hind wings as above. The head and thorax brown; the abdomen glossy black, with a bright red line on each side; the antennæ and legs black. Expanse $1\frac{1}{2}$ inch.

Hab. Mexico, Xucumanatlan, Guerrero, 7000 feet (*H. H. Smith*).

One specimen of this fine insect was taken by Mr. H. H. Smith in July 1888.

Ptychoglène ira, sp. n.

Primaries glossy blue-black, with the basal half dark orange, the base on the costal margin black: secondaries dull black. The underside of all the wings the same as above. The head, thorax, and abdomen black; antennæ and legs black; the tegulæ yellow at the base. Expanse $1\frac{1}{10}$ inch.

Hab. Mexico, Jalisco (*Schumann*).

One specimen of this very distinct species taken in July 1888.

Ptychoglène pamphylia, sp. n.

Primaries blackish brown-yellow from the base to the middle of the costal margin, but the yellow colour does not touch the inner margin: secondaries blackish brown, the basal half orange. The underside of all the wings the same as above. The head, thorax, and abdomen black; the tegulæ and the sides of the abdomen yellow; the legs and antennæ black. Expanse $1\frac{1}{10}$ inch.

Hab. Mexico, Jalisco (*Schumann*).

One specimen of this distinct species was taken in July 1888.

Ptychoglène phrada, sp. n.

Primaries red-carmine, bordered from the apex to the anal angle and very slightly along the inner margin with black: secondaries black, slightly hyaline, a broad red-carmine streak from the base along the costal margin, but not reaching the apex. The head, antennæ, thorax, abdomen, and legs all black. Expanse $1\frac{3}{10}$ inch.

Hab. Mexico, Atoyac, Vera Cruz (*Schumann*).

This pretty species is allied to *P. erythrophora*, Felder.

Ptychoglène pertunda, sp. n.

Primaries bright scarlet, with the outer margin broadly bordered with black: secondaries deep black. The head,

thorax, and abdomen brownish black; the tegulæ bright scarlet; the antennæ and legs black. Expanse 1 inch.

Hab. Mexico, Coatepec (*Brooks*).

A pretty distinct species, allied to *P. æqualis*, Walker.

Fam. Melameridæ.

ÆNOTRUS, Druce.

Ænotrus mamitus, sp. n.

Primaries and secondaries uniform dull black, with the fringe of all the wings greyish; the underside of the primaries black, with the costal margin from the base to beyond the middle edged with pinkish white; a curved cream-coloured band edged with pink crosses the wing from the costal margin near the apex to the outer margin close to the anal angle: secondaries brownish black, crossed by two pinkish-white lines, the costal margin edged with white. The head, thorax, and abdomen black; the collar and tegulæ edged with yellow; antennæ and legs black. Expanse $1\frac{4}{10}$ inch.

Hab. Mexico, Amecameca (*F. D. Godman*).

Mr. Godman took one specimen of this very distinct species in April 1888.

Ænotrus splendens, sp. n.

Primaries dull black, with two cream-coloured spots on the costal margin near the apex in the male, and only one spot in the female: secondaries dull black, with two indistinct white spots on the outer margin near the apex in the male, without any in the female. The underside: primaries dull black, with the spots as above, and one minute white dot on the middle of the outer margin: secondaries black, with a streak at the base and two spots on the costal margin and one on the outer margin cream-colour. A large spot at the base and one on the inner margin near the anal angle bright carmine; in some specimens the latter spot joins a cream-coloured spot in the centre of the wing. The head, thorax, and abdomen black; the collar orange; the antennæ and legs black. Expanse $1\frac{1}{4}$ inch.

Hab. Mexico, Omilteme, Guerrero, 8000 feet (*H. H. Smith*).

Both sexes of this beautiful little species were taken by Mr. Smith in July 1888.

MELANCHROIA, Hübn.

Melanchroia phæbe, sp. n.

Primaries and secondaries blue-black, the apex of the former tipped with white, the base orange on the costal margin. The underside of all the wings dull black, with the veins deep black, the base of all the wings bright orange. The head, thorax, and abdomen black; the collar and tegulæ orange; the antennæ and legs black. Expanse $1\frac{1}{2}$ inch.

Hab. Mexico, Amula, Guerrero, 6000 feet (*H. H. Smith*).

This species is allied to *M. inconstans*, Hübn., from which it is at once distinguished by the orange-coloured base of the primaries and other differences on the underside. Both sexes of this insect were taken by Mr. Smith in August 1888.

Fam. Hepialidæ.

Phassus Smithi, sp. n.

Primaries pale fawn-colour, indistinctly mottled with a darker shade; a few lunular-shaped markings near the apex and along the outer margin: secondaries uniformly reddish fawn-colour, slightly streaked with paler colour along the costal margin near the apex. The underside of all the wings pale fawn-colour. The head and thorax reddish fawn-colour; the abdomen and legs pale fawn-colour; the antennæ brown. Expanse $4\frac{1}{10}$ inches.

Hab. Mexico, Atoyac, Vera Cruz (*H. H. Smith*).

One specimen of this fine species was taken by Mr. Smith in May 1888; it is allied to *P. Championi*, but it is considerably different in colour and marking.

Fam. Notodontidæ.

TIFAMA, Walker.

Tifama argentifera, sp. n.

Primaries silvery white, shading off to dark grey along the inner and outer margin; the costal margin bordered with dark brown from about the middle to near the apex; extending from the apex to the anal angle a submarginal row of black lunular-shaped marks, edged with white on the inner side; a white spot on the inner margin beyond the middle and a faint brown line crossing the wing towards the apex: secondaries pure white, with the outer margin from the apex

almost to the anal angle clouded with brownish black. The underside of the primaries pale brown, the secondaries white, with the costal margin brown. The head, thorax, and tegulæ silvery grey; the abdomen brownish grey; the antennæ and legs brown. Expanse 3 inches.

Hab. Mexico, Teapa, Tabasco (*H. H. Smith*).

A very fine species, quite distinct from any known to me; it was taken in March 1888.

DICENTRIA, Herr.-Schäff.

Dicentria phraortes, sp. n.

♂. Primaries cream-colour, shaded with brown along the costal margin: secondaries white, slightly hyaline, the fringe yellowish. The head, thorax, and abdomen pale brown; antennæ brown.

♀. Primaries dark purplish brown, with several black streaks near the anal angle: secondaries dusky white. The head and thorax brown; the tegulæ and abdomen pale fawn-colour; antennæ brown. Expanse, ♂ $1\frac{1}{2}$, ♀ $2\frac{1}{10}$ inches.

Hab. Mexico, Coatepec (*J. Brooks*); Jalapa (*in coll. Dognin*).

A very distinct species, not closely allied to any with which I am acquainted.

Fam. Palindiidæ.

PALINDIA, Guén.

Palindia regina, sp. n.

Primaries silvery white, crossed from the costal margin to the anal angle by three wide bands of pale fawn-colour, edged with a dark brown line, the two inner bands being much the widest, the third band being little more than a narrow line; a marginal dark brown line extends from the apex to the anal angle: secondaries pale glossy yellow, shading off to white at the base and along the inner margin; a large black spot close to the apex; two black dots on the outer margin about the middle and one black dot nearer the anal angle. The underside pale glossy yellow, becoming whitish at the apex of the primaries and secondaries; the primaries crossed from the costal to near the inner margin by two wide black bands, becoming narrower as they reach the inner margin; the black spot at the apex of the secondaries is considerably

smaller than it is above. The head and collar pale yellowish white; the thorax, tegulæ, and the base of the abdomen silvery white; the abdomen yellowish white, darker at the anus and on the underside; the legs and antennæ pale fawn-colour. Expanse 2 inches.

Hab. Ecuador, Sarayacu (*Buckley*); Zamora, September (*in coll. Mons. P. Dognin*).

This very beautiful species is quite distinct from any known to me.

XII.—*Ramulina parasitica*, a new Species of Fossil Foraminifera infesting *Orbitolites Mantelli*, var. *Theobaldi*, with Comparative Observations on the Process of Reproduction in the Mycetozoa, Freshwater Rhizopoda, and Foraminifera. By H. J. CARTER, F.R.S. &c.

[Plate VIII.]

Ramulina parasitica, n. sp. (fossil).

Test thin, calcareous. Consisting individually of a single chamber (Pl. VIII. fig. 2, *a*), which is stoloniferous, and collectively (fig. 1, *ff*, and fig. 2) of the same, forming a reticulated structure in which the chambers are united to each other by the stolons (fig. 2, *b*). Chamber or lobe varying in shape from globularity to any kind of multiangulate figure, which may be produced by a variable number of stolons dragging out its convex surface in different directions into angular forms, so as in the aggregate to effect a reticulated structure in which the chambers are represented by the knots and the stolons by the interuniting cords of the net (fig. 1, *ff*). Chambers or lobes varying in size under 1-360th inch in diameter; stolons cylindrical, about 1-1800th inch in diameter, varying in length with the distance between the chambers which they connect. The projecting angles of neighbouring chambers often uniting directly, so that two or more become continuous without the intervention of stolons (fig. 1, *g*, and fig. 2, *ee*). Some are dark brown and others calc-white (what the brown colour arises from I am unable to say). Externally furnished (chiefly on the convex side or that opposite the stolons) with a number of delicate, straight, hair-like tubuli about 2-6000ths inch long and almost of immeasurable thinness (fig. 2, *ccc*), each of which projects